No significant interactions were found between race or gender and radiographic knee, hip, or hand OA with lumbar spine IRF.
Conclusion: Interestingly, the strongest associations were found between OA of the facet joints of the spine, which are synovial joints, and OA of both the knees and hands, also synovial joints. These findings also suggest that hip OA may have a different etiology from that of lumbar spine IRF; this is not surprising given the prevalence of morphometric abnormalities cited as a common etiology for hip OA. The fact that lumbar OST, but not DSN, were associated with knee OA may in part be due to reliance on K-L grade, a system weighted for the presence of osteophyte, for defining OA of the knee. Nevertheless, these findings underscore the importance of analyzing lumbar spine IRF as separate outcomes for OA studies as they likely reflect different processes ongoing in the joint organ during the course of this disease.

Table. Adjusted associations between lumbar spine IRF and radiographic knee, hip and hand OA

	DSN OR(95% CI)	OST OR(95% CI)	FOA OR(95% CI)
Knee OA	1.16 (0.84, 1.59)	1.62 (1.16, 2.27)	1.69 (1.15, 2.49)
Hip OA	0.99 (0.71, 1.38)	1.01 (0.72, 1.43)	0.89 (0.60, 1.31)
Hand OA	1.14 (0.79, 1.63)	0.81 (0.55, 1.18)	1.82 (1.15, 2.89)

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DIAGNOSIS OF LUMBAR SPINAL STENOSIS: AN UPDATED SYSTEMATIC REVIEW

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Purpose: To update our previous systematic review on the diagnostic accuracy of tests used to diagnose lumbar spinal stenosis. A wide range of clinical, radiologic and electrodiagnostic tests are used to diagnose lumbar spinal stenosis. An accurate diagnosis is vital, because lumbar spinal stenosis may require specific medical advice and treatment. Therefore, it is important to know the accuracy of these diagnostic tests currently available.
Methods: A comprehensive literature search was conducted for original diagnostic studies on lumbar spinal stenosis, in which one or more diagnostic tests were evaluated with a reference standard, and diagnostic accuracy were reported or could be calculated. Our previous systematic review was updated up to March 2004, this review up to March 2011. Two reviewers independently checked all eligible articles for inclusion criteria. Included studies were assessed for their methodological quality using the Quadas tool. Study characteristics and reported diagnostic accuracy were extracted.
Results: Twenty-two additional articles over the 24 included in the previous review met the inclusion criteria. Combined, this resulted in twenty articles concerning imaging tests, 11 articles evaluating electrodiagnostic tests, and 15 articles evaluating clinical tests. Estimates of the diagnostic accuracy of the tests differed considerably. Because of the heterogeneity of the tests, study population, and reference standards, statistical pooling of results was not possible.
Conclusions: At present the most promising test for lumbar spinal stenosis is MRI, avoiding myelography because of its invasiveness and lack of superior accuracy. Electrodiagnostic studies showed no superior accuracy for conventional electrodiagnostic testing compared to MRI. The most useful clinical findings for ruling in the diagnosis of lumbar spinal stenosis are billateral buttock or leg pain, the absence of pain when seated, the improvement of symptoms when bending forward, and a wide-based gait are the most useful individual findings for ruling in the diagnosis of lumbar spinal stenosis.

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IMMEDIATE EFFECTS OF MOTION STYLE ACUPUNCTURE TREATMENT (MSAT) IN ACUTE LOW BACK PAIN WITH SEVERE DISABILITY: A MULTICENTER, RANDOMIZED, CONTROLLED TRIAL

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Purpose: Acupuncture is widely-used to treat patients with low back pain (LBP), despite insufficient evidence of its efficacy for acute LBP (aLBP). Motion style acupuncture treatment (MSAT) requires a patient to exercise while receiving acupuncture, a special style of non-traditional acupuncture. This study aimed to evaluate the effects of MSAT on aLBP with severe disability where the effect of acupuncture has not been confirmed.
Methods: Fifty-eight aLBP participants with severe functional disability, defined as an Oswestry Disability Index (ODI) value>60%, were randomly allocated to either MSAT group (n=29) or conventional diclofenac injection group (n=29). All procedures were limited to one session and results were assessed before and 30 minutes after treatment. The primary outcome was measured using the numerical rating scale (NRS) for aLBP intensity. Secondary outcomes were measured using the NRS for leg pain intensity, if exists, and ODI for functional impairment.
Results: At 30 minutes after treatment, the MSAT group experienced a significant reduction in the NRS for LBP, radicular pain and ODI scores; 3.8±2.1 (p<.001), 1.2±1.9 (p=.001), and 33.5±15.2% (p<.001), respectively. In the diclofenac injection group, the NRS for LBP decreased by 0.7±1.1 (P=.002), but not in radicular pain and ODI scores; 0.3±0.7 (P=.055), and 0.4±6.6% (P=.866), respectively. In addition, the NRS of LBP (p<.001), radicular pain (p=.008) and ODI scores (p<.001) of the MSAT group were significantly lower than those of the diclofenac injection group.
Conclusions: These results suggest that MSAT has positive effects on immediate pain relief and the recovery of functional status of patients with aLBP and severe disability. Whether MSAT is superior to traditional acupuncture for aLBP is encouraged as future research matter.

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DO THE PREVALENCE RATES OF SYMPTOMATIC FACET JOINT ARTHROPATHY AND ASYMPTOMATIC FACET JOINT ARTHROPATHY CONCUR?

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Purpose: Lumbar facet joints are responsible for chronic low back pain in approximately 15% of young adults and 32% of older adults. Imaging studies have demonstrated that arthritic changes preferentially affect the L45 level followed by L5S1 then L34. Such changes as demonstrated by computed tomography have been shown to not correlate with facet joints that are painful. A better understanding of whether the prevalence of arthritic changes on imaging studies agrees with prevalence rates of painful facet joint arthritis as determined by validated diagnostic blocks will help direct treatment interventions. The purpose of this study was to compare the prevalence of painful facet joint arthropathy (FJA) in symptomatic adults to published prevalence rates of facet joint osteoarthritis (FJOA) in asymptomatic adults.
Methods: A retrospective chart review was conducted of consecutive CLBP patients having undergone definitive diagnostic procedures after presenting to an interventional spine care practice. Patients either underwent provocation lumbar discography, dual diagnostic medial branch blocks with local comparative anesthetics, or intra-articular diagnostic SIJ injections employing strict operational criteria to confirm a source of LBP. Clinical characteristics and physical exam findings were used to determine which injection to perform first and then sequentially if necessary. Cases without definitive diagnosis were not considered in this analysis. The prevalence rates for painful FJA in our symptomatic sample were estimated with 95% confidence intervals (CI) for the symptomatic group and compared to historical asymptomatic rates using a chi-square test.
Results: The chart review included a total of 378 cases from 358 patients presenting with CLBP whose low back disorder was definitively diagnosed. The mean age was 52.8 years (SD = 15.0) and the median duration of LBP was 12 months (IQR = 6-24). There were 208 cases not included in analysis because definitive diagnostic injections were not completed as patients improved clinically. The estimated prevalence rate of FJA was 30.6% (95% CI = 24.2%, 37.9%). CLBP was documented on the left side in 24 FJA cases (46%), right in 16 cases (31%), and bilaterally in 12 cases (23%).
Prevalence rates of asymptomatic FJOA have been reported by level to be 15.1% for L23, 30.6% for L34, 45.1% for L45, and 38.2% for L5S1 (Kalichman). Based on our sample, the prevalence of symptomatic FJA by level was estimated to be 25% for L12 (95% CI = 4.6%, 69.9%), 39.5% for L45 (95% CI =